

## **REMARKS**

### **STATUS OF CLAIMS:**

Claims 1-29 stand rejected under 35 U.S.C. §102(a) as being anticipated by Zeh (US 2002/0103331) or under 35 U.S.C. §102(b) as being anticipated by Robinson (US 4339371), Chen (US 5763530) or Schaper (EP 277 728) or in the alternative claims 1-29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Zeh (US 2002/0103331), Robinson (US 4339371), Chen (US 5763530) or Schaper (EP 277 728).

Claims 2-14 and 16-32 are currently pending. In this Amendment, claims 1 and 15 have been cancelled. New independent claims 30, 31, and 32 are being submitted. Dependent claims 2-8, 11, 13, and 14 that depended on claim 1 have been amended to depend from claim 30. Support for new claim 30 can be found in the specification, for example in paragraphs [0015] and [0034]. Claim 15, which was dependent on claim 1, has been rewritten as new independent claim 31. Support for new claim 31 can be found in the specification, for example in paragraphs [0016] and [0034]. Dependent claims 16-23, 26, 28, and 29 that depended on claim 15 have been amended to depend from claim 31. Support for new claim 32 can be found in the specification, for example in paragraphs [0015] and [0034] as well as the discussion regarding structure in paragraph [0076]. Accordingly, no new matter has been added.

### **SUBSTANCE OF THE INTERVIEW UNDER M.P.E.P. § 713.04**

As an initial matter, Applicants appreciate the courtesies extended to their representatives, Ms. Rossi and Mr. Irving, in an interview granted on September 15, 2005.

The substance of the interview follows, considered in view of the Interview Summary. At the interview, the Examiner suggested amending the claims to recite the association

of the claimed copolymers with the claimed surfactant. New independent claims 30 and 31, presented herein, are drawn to copolymer compositions comprising at least one associative inverse emulsion copolymer, wherein said at least one associative inverse emulsion copolymer has associative properties provided by an effective amount of at least one emulsification surfactant chosen from diblock and triblock polymeric surfactants, and wherein said at least one associative inverse emulsion copolymer has a Huggins' constant ( $k'$ ) determined in 0.01 M NaCl greater than 0.5; and said at least one associative inverse emulsion copolymer has a storage modulus ( $G'$ ) at 6.3 Hz greater than 50 Pa.

## **REJECTIONS UNDER 35 USC 102 and 35 USC 103**

### With respect to reference Zeh (US 2002/0103331)

Zeh does not teach the use of a diblock (A-B) or triblock (A-B-A) surfactant in the emulsification system. Zeh merely teaches the use of sorbitan monooleate or polyoxyethylene sorbitan monooleate in Comparative Example 5. Accordingly, Zeh fails to teach or suggest the presently claimed compositions.

### With respect to reference Robinson (US 4339371)

Robinson does not teach or suggest the presently claimed inventions. For example, Robinson does not teach the use of a diblock (A-B) or triblock (A-B-A) surfactant in combination with a copolymer. Robinson generally teaches the use of a random block surfactant. See, e.g., col. 1, line 54 - col. 2, line 5. In Example 6, a triblock surfactant was used with Robinson's random block surfactant but those surfactants were combined with a homopolymer, not a copolymer as presently claimed. See, e.g., col. 7, lines 52-53. Robinson also fails to teach a copolymer with a Huggins' constant of greater than 0.5 and a storage modulus of greater than 50 Pa. Accordingly, Robinson fails to expressly anticipate the presently claimed inventions.

Robinson also fails to inherently anticipate the presently claimed inventions. As discussed in the present application, the pH of the aqueous phase, the nature and concentration of the initiator, and the presence or absence of any crosslinking agent during polymerization can affect the Huggins' constant and storage modulus of the resulting polymers. See, e.g., Tables 1 and 2, pages 10 and 21 respectively, Comparative Examples 1, 2, and 5-10. Only Example 1 of Robinson sets forth any of those conditions. That example, however, fails to teach or suggest either at least one diblock and triblock polymeric surfactant or at least one associative inverse emulsion copolymer comprising at least one cationic polymer segment.

Robinson also fails to render the present claims obvious. Robinson fails to teach the Huggins' constant or storage modulus of any of its polymers. The present application has shown that various parameters of the polymerization reaction, including the pH, the nature and the concentration of the initiator, and the presence or absence of any crosslinking agent, affect the Huggins' constant or storage modulus of the resulting polymers. Robinson teaches a wide range of acceptable polymerization conditions, such as a pH ranging from 2-12 (col. 4, lines 59-60) and an initiator chosen from "any free radical producing material well known in the art" in a concentration of from about 0.0005 to 0.5% by weight (col. 4, lines 37-44). Because Robinson is silent concerning the effect of any of those conditions on the resulting polymer, Robinson's broad disclosure fails to render the present claims obvious.

With respect to reference Chen (US 5763530)

Chen does not teach the use of a diblock (A-B) or triblock (A-B-A) surfactant in the emulsification system. Chen teaches the use of sorbitan monooleate, polyoxyethylene sorbitan monooleate, polyoxyethylene sorbitan trioleate, and polyoxyethylene sorbitan fatty acid, none of which are by definition a diblock and triblock surfactant. Since Applicants' invention requires a diblock and triblock surfactant, Chen does not teach or suggest Applicants' invention.

With respect to reference Schaper (EP 277 728)

Schaper does not teach the use of a diblock (A-B) or triblock (A-B-A) surfactant in the emulsification system. Schaper teaches "any conventional emulsifying surfactants can be used" (see page 4, lines 43-44 of Schaper). Since Applicants' invention requires a diblock and triblock surfactant, Schaper does not teach or suggest Applicants' invention.

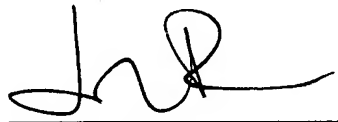
For the reasons cited above, the Applicants contend that the present invention is patentable over Zeh (US 2002/0103331), Robinson (US 4339371), Chen (US 5763530) or Schaper (EP 277 728), and thus it is respectfully requested that the rejections be reconsidered and withdrawn.

A request for continued examination, a request for an extension of time, and an IDS are submitted with this reply. It is submitted that the foregoing reply is completely responsive under 37 CFR 1.111 and that all grounds of rejection and objection have been completely overcome or obviated. It is submitted that all claims are now in condition for allowance and a notice of allowance for all pending claims is respectfully requested.

It is believed that there are no other additional fees required for entry of this amendment or for maintaining the pendency of this application. If there are any additional fees required to have this amendment entered or to keep the application pending the commissioner is hereby authorized to charge the fee to deposit account number 08-1800.

If there are any questions or comments regarding this paper or the present application,  
Examiner is invited to contact the undersigned at the below listed telephone number.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'Joanne Rossi', written over a horizontal line.

Joanne Rossi  
Reg. No. 43,061  
Attorney for Applicant  
302-594-5833

Hercules Incorporated  
Hercules Plaza  
1313 North Market Street  
Wilmington, DE 19894-0001  
US